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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,543	04/06/2000	Hidetoshi Kodama	Q58782	7511

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EXAMINER

TRAN, LY T

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 11/06/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,543

Applicant(s)

KODAMA ET AL.

Examiner

Ly T TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 6,9,10,28,29,31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,11-15 and 17-24 is/are rejected.
- 7) ☒ Claim(s) 3-5,7,8,16,25,26, 27 and 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,12. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species identified by characteristics 1B and 2B in Paper No. 7 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Mayer (USPN 6,239,817).

With respect to claims 1 and 11, Mayer discloses an ink jet recording apparatus comprising:

- A recording head having a dot formation element array including a plurality of dot formation elements arranged along a secondary scanning direction (Fig.4B: element 27, 27)
- A platen for holding a recording medium in position opposite the recording head during a printing operation while the recording head is caused to scan in a primary scanning direction (Fig.4B: element 30)
- A recording medium feed roller disposed upstream of the recording head (Fig.4B: element 20)
- An output roller disposed downstream of the recording head (Fig.7: element 102)
- A first hole which is formed in an area of the platen opposite a downstream portion of the dot formation element array with respect to the secondary scanning direction and which guides the ink that has been discarded outside a top end of the recording medium when data are recorded on the recording medium without leaving a margin on the top end of the recording medium (Fig.4B)
- Ink is squirted while the end portion of the recording medium is situated within the range of the dot formation element array in the secondary scanning direction, and a portion of the ink is discarded into a hole locally formed in the area of the surface of the platen opposite the end portion of the recording medium situated thereat, to thereby record data on the

recording medium without leaving a margin on the edge of the recording medium (Fig.7)

With respect to claim 2, Mayer discloses an ink jet recording apparatus comprising:

- A recording head having a dot formation element array including a plurality of dot formation elements arranged along a secondary scanning direction (Fig.4B: element 27, 27)
- A platen for holding a recording medium in position opposite the recording head during a printing operation while the recording head is caused to scan in a primary scanning direction (Fig.4B: element 30)
- A recording medium feed roller disposed upstream of the recording head (Fig.4B: element 20)
- An output roller disposed downstream of the recording head (Fig.7: element 102)
- A second hole which is formed in an area of the platen opposite an upstream portion of the dot formation element array with respect to the secondary scanning direction and which guides the ink that has been discarded outside a top end of the recording medium when data are recorded on the recording medium without leaving a margin on the top end of the recording medium (Fig.4B)

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (6,239,817) in view of Endo (6325,489).

Mayer fails to teach the recording head performs an interlaced recording operation.

Endo teaches the recording head performs an interlaced recording operation (Column 7: line 25-35).

It would have been obvious to one having ordinary skill in the art at the time the invention was made with an interlaced recording operation as taught by Endo. The motivation of doing so is to prevent banding or the production blank areas in order to provide high quality color printing (Endo, USPN 6,325,489, Column 7: line 39-41).

4. Claims 13-15, 17, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (USPN 5,291,227) in view of Mayer (USPN 6,239,817).

With respect to claims 13-15, Suzuki discloses an ink jet recording apparatus comprising:

- A recording head having a dot formation element array including a plurality of dot formation elements arranged along a secondary scanning direction (Fig.1: element 2, 2a)
- A platen for holding a recording medium in position opposite the recording head and holds a recording medium in position by supporting the recording medium from below when data are recorded, by means of recording head, on the recording medium to be intermittently transported in the secondary scanning direction (Fig.1: element 12)
- A control section for controlling, on the basis of recorded data, intermittent transportation of the recording medium in the secondary scanning direction, reciprocal movement of the recording head in the primary scanning direction, and the squirting of ink from the recording head (Column 3: line 10-22)
- Ink receiver open holes which are formed in the areas of the platen corresponding to the right and left sides of one type of recording medium of predetermined size, from among the recording media to be transported over the platen in the secondary scanning direction, the holes being formed so as to extend beyond the respective right and left sides of the employed recording medium and formed to longitudinally extend beyond the range of the dot formation elements in the secondary scanning direction (Fig.2)

- A platen has a flat upper surface on which a plurality of protuberances protruding the same distance are formed at predetermined intervals in the primary scanning direction, and holds the recording medium in position by supporting the recording medium for below through use of flat tops of the plurality of protuberances when data are recorded (Fig.1)

With respect to claims 17 and 18, Suzuki discloses an ink absorbing material is provided in each of the ink receiver open holes, the ink absorbing material is situated within corresponding ink receiver open hole such that the upper surface of the ink absorbing material is located in the vicinity of the opening of the through hole opposite the recording head ((Fig.2: element 7).

With respect to claims 19 and 20, Suzuki discloses a first removal stopper is provided along the edge of the opening of each of the ink receiver open hole and the first removal stopper is formed into a step provided along the edge of the opening (Fig.1, 2).

With respect to claims 21, Suzuki discloses each of the ink receiver open holes penetrates through the platen from the side opposite the recording head to the other side (Fig.1, 2)

With respect to claims 22 -24, Suzuki discloses the second removal stoppers are provided in each of the ink receiver open holes and are formed into raised long lines extending along the interior surface of the ink receiver open hole in the direction of penetration the second removal stopper is formed into a step provided along the edge of the opening (Fig.1, 2).

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However, Suzuki fails to teach a first operation mode and a second mode wherein in a case where data are recorded on the recording medium without leaving a margin on either side of the recording medium, the second operation mode is performed, the recording region for the second mode is set to be wider than the width of the recording medium by about 4.5 mm to 5.5 mm.

Mayer teaches a first operation mode and a second mode wherein in a case where data are recorded on the recording medium without leaving a margin on either side of the recording medium, the second operation mode is performed (Column 3: line 30-50)

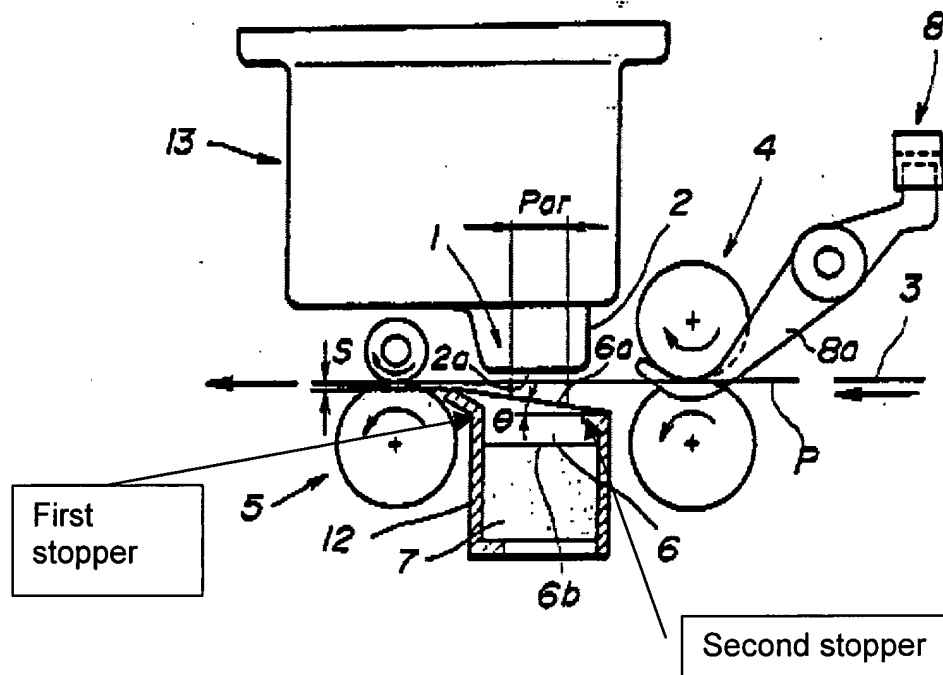
While Meyer does not specifically teach second mode is set to be wider than the width of the recording medium by about 4.5 mm to 5.5 mm. Mayer teach the distance d can be greater than 2 mm depending upon the size of the particular printing (Column 6: line 1-5). Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made for the second mode is set to be wider than the width of the recording medium by a distance depend on the side of the medium to achieve the margin.

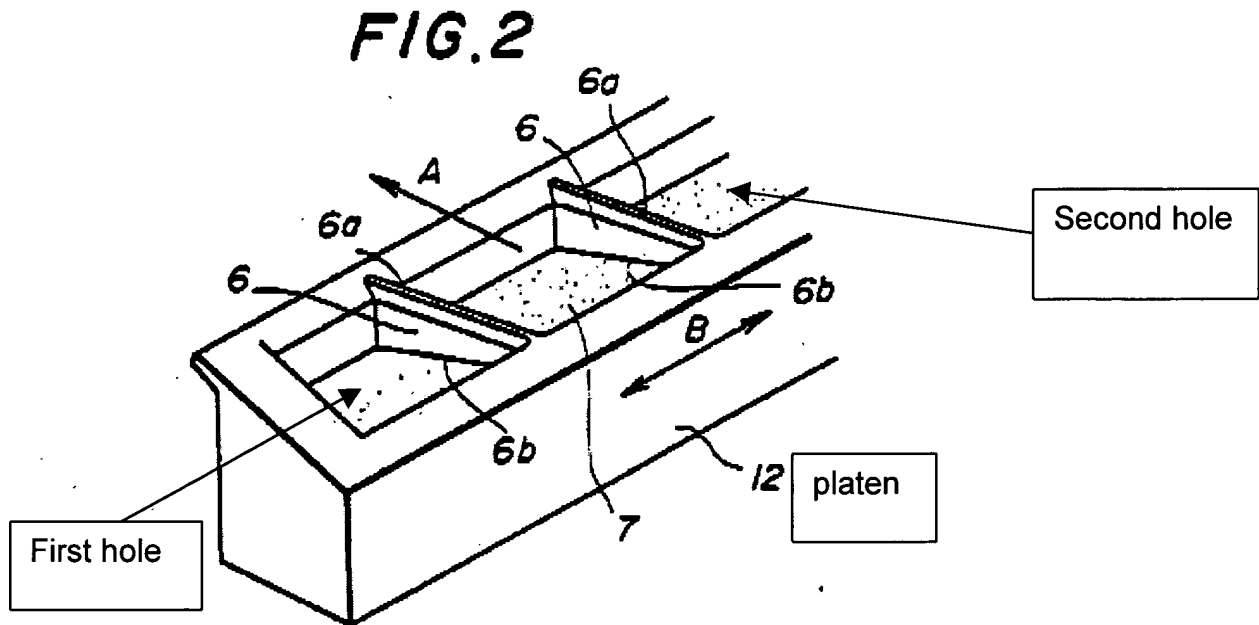
It would have been obvious to one having ordinary skill in the art at the time the invention was made with a first operation mode and a second mode wherein in a case where data are recorded on the recording medium without leaving a margin on either side of the recording medium, the second operation mode is performed as taught by Mayer. The motivation of doing so is in order to produce borderless print image without

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the need of utilizing a special trimming device or perforated medium stock (Meyer USPN 6,239,817, Column 1: line 53-56).

FIG. 1





Allowable Subject Matter

5. Claims 3-5, 7, 8, 16, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3-5, 7, 8, 27 and 30 are allowable over prior art of record because at least prior art of record have not been found to anticipate or teach a second hole which is formed in an area of the platen opposite an upstream portion of the dot formation element array with respect to the secondary scanning direction and which guides the ink that has been discarded outside a top end of the recording medium when data are recorded on the recording medium without leaving a margin on the top end of the recording medium.

Claim 16 is allowable over prior art of record because at least prior art of record have not been found to anticipate or teach in both first and second operation modes, the control section assumes, as a speed at which the recording head reciprocally travels in the primary scanning direction, a single acceleration gradient at which the recording head is to shift from a stationary state to a constant speed and a single deceleration gradient at which the recording head is to shift from the constant speed state to the stationary state, and a travel distance attained by the recording head of the second operation mode in the constant speed state is longer than a travel distance attained by the recording head of the first operation mode in the constant speed and travel distance in an acceleration side and travel distance in deceleration side are substantially equal.

Claim 25 is allowable over prior art of record because at least prior art of record have not been found to anticipate or teach a tilt section s provided in each of the ink receiver open holes at an angle from the recording head to the other side so as to maintain the through state of the through hole, and an ink absorbing material is laid on the tilt section.

Claim 26 is allowable over prior art of record because at least prior art of record have not been found to anticipate or teach a tilt section s provided in each of the ink receiver open holes at an angle from the recording head to the other side so as to maintain the through state of the through hole, a plurality of ribs being provided on the tilt section at the ribs being formed so as to be lower than the opening of the through hole.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T TRAN whose telephone number is 703-308-0752. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0967.



October 29, 2002



Thinh Nguyen
Primary Examiner
Technology Center 2800